

CLAIMS

1. A signal output circuit comprising:

an output transistor of an NPN type bipolar transistor for outputting an output signal;
a ground side output control transistor that turns ON and OFF according to an input signal so that turning ON drops the potential of the base of the output transistor to turn OFF the output transistor, and turning OFF raises the potential of the base of the output transistor to turn ON the output transistor;

a base current supply resistive element for supplying current from an input power supply to the base of the output transistor;

a power supply side output control transistor that is inserted between the base current supply resistive element and the base of the output transistor and turns ON and OFF in opposite ways as the ground side output control transistor according to the input signal;

a ground side current bypass transistor, that turns ON and OFF in the same way as the ground side output control transistor according to the input signal so that turning ON allows current of the base current supply resistive element to flow and turning OFF stops the current of the base current supply resistive element to flow; and

a current limitation resistive element that is inserted between the ground side current bypass transistor and the base current supply resistive element.

2. The signal output circuit according to Claim 1, further comprising an inversion circuit to which the voltage between the ground side current bypass transistor and the current limitation resistive element is input for inverting this voltage to control the power supply side output control transistor.

3. The signal output circuit according to Claim 2, further comprising a second current limitation resistive element to be connected to the output of said inversion circuit.

4. The signal output circuit according to one of Claims 1 to 3, wherein the ground side output control transistor, the power supply side output control transistor and the ground side current bypass transistor are MOS transistors.

5. The signal output circuit according to one of Claims 1 to 4, wherein the base current supply resistive element, the current limitation resistive element and the

second current limitation resistive element are resistors.

6. A power supply voltage monitoring device comprising the signal output circuit according to one of Claims 1 to 5, further comprising:

resistive elements connected in series for dividing the power supply voltage;

a reference voltage generation circuit for generating the reference voltage; and

a comparator for comparing the voltage at a midpoint of said resistive elements connected in series and the reference voltage generated by said reference voltage generation circuit so as to use the comparison output as an input signal of the signal output circuit, wherein the output signal of the signal output circuit is output as a power supply voltage monitoring signal.